

**AMENDMENTS TO THE CLAIMS:**

**Please amend the claims as follows:**

1. (Currently Amended) A nanosilicon light-emitting element, ~~wherein~~ comprising:  
an amorphous  $\text{SiO}_x$  film ~~consisting of~~ comprising a mixture of silicon atoms and oxygen atoms is formed on a semiconductor substrate, ~~the result is~~ said amorphous  $\text{SiO}_x$  film being heat treated in an inert gas to form the silicon atoms into nanosilicon of about 3.0nm or less, and  
wherein said amorphous  $\text{SiO}_x$  film including said nanosilicon ~~the result~~ is treated with an aqueous solution of hydrofluoric acid and subjected to thermal oxidation to allow at least one ~~any of the~~ three primary colors of light to be emitted at a low operating voltage at room temperature.
2. (Currently Amended) A nanosilicon light-emitting element, ~~wherein~~ comprising:  
an amorphous  $\text{SiO}_x$  film ~~consisting of~~ comprising a mixture of silicon atoms and oxygen atoms is formed on a semiconductor substrate, ~~the result is~~ said amorphous  $\text{SiO}_x$  film being heat treated in an inert gas to form the silicon atoms into nanosilicon of about 3.0nm or less, and  
wherein said amorphous  $\text{SiO}_x$  film including said nanosilicon ~~the result~~ is repeatedly treated with an aqueous solution of hydrofluoric acid and subjected to natural oxidation to allow at least one ~~any of the~~ three primary colors of light to be emitted at a low operating voltage at room temperature.
3. (Currently Amended) The nanosilicon light-emitting element according to claim 1, wherein ~~the~~ a blue color of the three primary colors of light is emitted clearly and in a stable

manner.

4. (Currently Amended) The nanosilicon light-emitting element according to claim 1, wherein the semiconductor substrate is comprises a silicon substrate, and ~~the~~ a temperature of the heat treatment is comprises a temperature in a range of about ~~900~~ 900°C to 1200°C.

5. (Currently Amended) The nanosilicon light-emitting element according to claim 1, wherein ~~the~~ a temperature of the thermal oxidation treatment is comprises a temperature in a range of about ~~[[400]]~~ 400°C to 1000°C.

6. (Original) The nanosilicon light-emitting element according to claim 1, wherein the nanosilicon is formed by high frequency sputtering.

7. (Currently Amended) A method for manufacturing a nanosilicon light-emitting element, comprising: ~~comprising the steps of:~~

forming an amorphous  $\text{SiO}_x$  film ~~consisting of~~ comprising a mixture of silicon atoms and oxygen atoms on a semiconductor substrate;

heat treating ~~the result~~ said amorphous  $\text{SiO}_x$  film in an inert gas to form the silicon atoms into nanosilicon of about 3.0nm or less; and

subjecting said amorphous  $\text{SiO}_x$  film including said nanosilicon ~~the result~~ to treatment with an aqueous solution of hydrofluoric acid and thermal oxidation to allow at least one ~~any~~ of ~~the~~ three primary colors of light to be emitted at a low operating voltage at room temperature.

8. (Currently Amended) A method for manufacturing a nanosilicon light-emitting

element, comprising: ~~comprising the steps of:~~

forming an amorphous  $\text{SiO}_x$  film ~~consisting of~~ comprising a mixture of silicon atoms and oxygen atoms on a semiconductor substrate;

heat treating ~~the result~~ said amorphous  $\text{SiO}_x$  film in an inert gas to form the silicon atoms into nanosilicon of about 3.0nm or less; and

subjecting said amorphous  $\text{SiO}_x$  film including said nanosilicon ~~the result~~ repeatedly to treatment with an aqueous solution of hydrofluoric acid and natural oxidation to allow at least one ~~any of the~~ three primary colors of light to be emitted at a low operating voltage at room temperature.

9. (Currently Amended) The method for manufacturing a nanosilicon light-emitting element according to claim 7, wherein ~~the~~ a blue color of the three primary colors of light is emitted clearly and in a stable manner.

10. (Currently Amended) The method for manufacturing a nanosilicon light-emitting element according to claim 7, wherein the semiconductor substrate is comprises a silicon substrate, and ~~the~~ a temperature of the heat treatment is comprises a temperature in a range of about ~~900~~ 900°C to 1200°C.

11. (Currently Amended) The method for manufacturing a nanosilicon light-emitting element according to claim 7, wherein ~~the~~ a temperature of the thermal oxidation treatment is comprises a temperature in a range of about ~~[[400]]~~ 400°C to 1000°C.

12. (Original) The method for manufacturing a nanosilicon light-emitting element according to claim 7, wherein the nanosilicon is formed by high frequency sputtering.

13. (Currently Amended) The nanosilicon light-emitting element according to claim 2, wherein ~~the~~ a blue color of the three primary colors of light is emitted clearly and in a stable manner.
14. (Currently Amended) The nanosilicon light-emitting element according to claim 2, wherein the semiconductor substrate ~~is~~ comprises a silicon substrate, and ~~the~~ a temperature of the heat treatment ~~is~~ comprises a temperature in a range of about ~~900~~ 900°C to 1200°C.
15. (Currently Amended) The nanosilicon light-emitting element according to claim 2, wherein ~~the~~ a temperature of the thermal oxidation treatment ~~is~~ comprises a temperature in a range of about ~~[[400]]~~ 400°C to 1000°C.
16. (Original) The nanosilicon light-emitting element according to claim 2, wherein the nanosilicon is formed by high frequency sputtering.
17. (Currently Amended) The method for manufacturing a nanosilicon light-emitting element according to claim 8, wherein ~~the~~ a blue color of the three primary colors of light is emitted clearly and in a stable manner.
18. (Currently Amended) The method for manufacturing a nanosilicon light-emitting element according to claim 8, wherein the semiconductor substrate ~~is~~ comprises a silicon substrate, and ~~the~~ a temperature of the heat treatment ~~is~~ comprises a temperature in a range of about ~~900~~ 900°C to 1200°C.
19. (Currently Amended) The method for manufacturing a nanosilicon light-emitting

element according to claim 8, wherein ~~the~~ a temperature of the thermal oxidation treatment is comprises a temperature in a range of about [[400]] 400°C to 1000°C.

20. (Original) The method for manufacturing a nanosilicon light-emitting element according to claim 8, wherein the nanosilicon is formed by high frequency sputtering.

21. (New) The nanosilicon light-emitting element according to claim 1, wherein at least a portion of said nanosilicon comprises nanosilicon formed on a surface of said amorphous SiO<sub>x</sub> film.

22. (New) A nanosilicon light-emitting element, comprising:  
an amorphous SiO<sub>x</sub> film formed on a semiconductor substrate, said amorphous SiO<sub>x</sub> film comprising nanosilicon formed therein; and  
a light emitting layer comprising nanosilicon formed on a surface of said amorphous SiO<sub>x</sub> film.

23. (New) The nanosilicon light-emitting element according to claim 22, further comprising:  
a transparent electrode formed on said light-emitting layer.

24. (New) The nanosilicon light-emitting element according to claim 23, wherein said light-emitting layer further comprises:  
an oxide layer formed on said nanosilicon.

25. (New) The nanosilicon light-emitting element according to claim 22, wherein said

nanosilicon in said light-emitting layer comprises nanosilicon particles having a particle size which is about 3.0 nm or less.